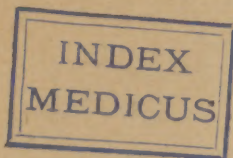


Cottell (H. A.)



ESTHETICS
OF
MEDICINE.



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ESTHETICS OF MEDIGINE:

The Doctorate Address

IN THE

MEDICAL DEPARTMENT OF THE UNIVERSITY OF
LOUISVILLE, 1886.



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ESTHETICS OF MEDICINE.

The life of the physician, that of the soldier during the hard campaign excepted, is the most trying of human callings.

He is the servant of servants, and the only laborer whose hours of work and of rest are not laid down upon the circle of the dial. If he be young, he must await the tedious coming of business with chastened patience and hungry solicitude. If he be old, and have failed to garner a goodly harvest of things material, he must spend his days of failing strength in bitter contest with want and famine; and with all the odds against him, since the profession to which he has devoted his life will have so consumed him in mind and body as to leave him scarcely a resource that may be utilized in practice, craft, or trade for further support.

If he be of middle age, he must work with tireless energy, and carry a cheerful heart, a clear head, and a steady hand under the weight of grave responsibilities. Like Hannibal, he must allow "no toil to fatigue him bodily, or depress his spirits. Heat and cold he must bear alike; his rule as to food and drink must be set by natural appetite, not pleasure. His times of sleeping and waking must not depend on its being day or night; such hours as remain after his work is finished he may give to repose."

If he be married, his family must suffer neglect; if he forswear the happiness of domestic life, there is great danger that the public will forswear him; if he essay to keep abreast with the progress of his profession by reading and study, he must con his books at precarious intervals, with eye to the clock and ear to the bell, or neglect appointments and lose caste with his *clientele*; if he fail to read and study, he must soon fall behind in the race for honor and emolument; if he be endowed with uncommon talent or genius, and seek fame in the line of original research, he will find this rôle incom-

patible with the demands of a successful practice, and must either relinquish his cherished schemes, or follow them under the ban of poverty, if he be not counted crack-brained and visionary. If he have a taste for the fine arts, and acquire skill in letters, music, or painting, he must keep his achievements here a sacred secret, since, if known as an amateur in art, he will soon be counted an amateur in medicine to his lasting professional hurt. If he bring business principles into his practice, charging fees commensurate with the worth of his work, and collecting them promptly, he will be esteemed hard and grasping. If he make small bills, and bide with patience the time of tardy payers, his service, like his fee, will be rated low, and, again falling sick, the ungrateful patient will ignore him for some professional neighbor more worldly-wise than he. Like Ulysses of old, he must steer the frail bark of his destiny adown the narrow strait that flows 'twixt Scylla and Charybdis, famine on the one hand and consuming toil on the other!

I have set in shadow the way of the life which you have chosen, and to which I now welcome you; but only as the painter lays in somber tints the ground-work of his picture. If my design miscarry not, the canvas will soon show brighter colors, with views of hill and valley, lake and river, field and forest, rill and fountain, and a flood of sunlight over all.

It is clear that when viewed superficially as a laborer at his work, the physician does seem to lead a hard, unenviable life, and certain that any other calling of equal or approximate dignity gives promise of greater attainment in what the world calls success and happiness than is possible in medicine. But it is of easy demonstration that to him who holds medicine as a sacred calling and obeys her high behests with an eye single to her beauty, and a mind to meditate her deeper lessons, she reveals unfailing sources of true wealth and happiness.

Having espoused medicine, the student soon discovers within his legitimate province treasures of knowledge, science, and art, which no

human effort or capacity may exhaust or appropriate. The first essay is perhaps discouraging and seemingly without promise. The study of the human frame is a wearisome task. Dry bones are an abomination to the tyro in anatomy; but as he comes to know more of the subject, his interest grows apace. He notes the perfect fitness of each bone for its peculiar office, in size, structure and form; its graceful curves for the breaking of shock, and the deep-laid devices by which it is given strength without clumsiness and amplitude without undue weight. Here are areas for muscular attachment, so disposed that muscle may aid or antagonize muscle in exact measure, pointing to precision, grace, and perfect equilibrium.

These, and far more than these, are weighed with an eye to their nice significance, until the skeleton entire stands before his admiring gaze, like some stately ruin, wherein every foundation stone, every column, arch, and architrave bears testimony to beauty and use in the Maker's mind.

He sees channels cut through bone or laid

in flesh for artery, vein, nerve, and lymph vessel, and contemplates the beautiful adaptation of the heart, the lungs, and the digestive organs, each to its appropriate end; and then, that all may be nourished and directed in their appointed work, he sees intricate but perfect systems of vessels and nerves bringing every part of the organism into vital communication with the centers of force and nutrition. Looking deeper, he perceives that these many organs, however variant in form and function, are all composed of one simple anatomical element, the cell; and that of the countless myriads of these cells which make up the body as a whole, each is endowed with life and set to the performance of its own predestined office. And musing on this matchless mechanism and its marvelous adaptation to its grand purpose, interest mounts to enthusiasm, while the words of the Psalmist, "I am fearfully and wonderfully made," come to his mind with all the force and beauty of their divine import.

Pursuing his investigation further, physiology bids him contemplate the functions of the

economy, and wonder is lost in bewildering delight. Pervading all, and governing each organ, each cell, is that subtle essence, that mystery of mysteries, life. It flows into matter, seemingly inert, and lo, all is motion! Atom and molecule own new affinities and wake to higher work; each tiny cell springs into being at the touch divine, and like a new created world enters upon its ordered cycle of growth, maturity, and decay; each finished organ obeys the magic mandate and asserts its pre-ordained function; each system owns its heaven appointed hest, and all in rhythmic order, each for itself and yet for all, make up the harmony of the perfect whole—as many instruments together in the orchestra of varying *timbre*, range, and power, each sweetly answering its player's touch, through the appointed score and to the measure of the leader's beat, sound out the phrases of some noble symphony.

Now he contemplates the brain (the organ of the mind) and its inexplicable phenomena. How regal are its functions, receptive, conservative, creative! attentive to every appeal

of its own little world, but alive to the wonders of the great world as well; open to the perception of its ineffable beauty and busy with the solution of its intricate problems; the meeting place of earth and heaven, the debatable ground whereon none may set the line which shows where the functions of matter end and the offices of spirit begin. And as he meditates the wondrous theme, to him how apt, how true, and how truly inspired are the apostle's words: "Ye are the temple of the living God."

Or, turning to the senses whereby the man takes cognizance of the surrounding universe, let the student consider the organs of sight and hearing, those exquisite mechanisms through which impressions of color, form, and sound are made upon the brain, which, shaped and blended in the artist's soul, who knows the secret of their deeper harmonies, are bodied forth in poetry, sculpture, painting, and music. It has been said, with truth and poetry, of things wonderful and beautiful in nature—man, beast, bird, insect, flower, and crystal—that

they are the thoughts of God ; but none the less truly so are poems, statues, pictures, songs, and symphonies, thoughts of the Omniscient One in sublime expression through the medium of him who stands erect in his Maker's own image.

Chemistry ministers to the esthetic sense in every test, and the microscope opens to his view a world of dainty beauties ; while both alike suggest to the student conceits for the fancy and themes for exalted thought.

The first admonishes him ever of the reign of law, and that matter obeys the inflexible mandates of a power impersonal and cold, from the infinitely great to the infinitely small, from world to atom, from the starry systems of space to the molecules of the water-drop. The light, soft, white precipitates, and color changes in the test-tube or on the tile suggest the fleecy skirts of the summer clouds, or the feathery fall of the winter's snow, or bring to mind that trick of Nature's thaumaturgy which decks the trees with green in spring-time, the flowers with rainbow hues in summer, and leaf

and fruit with gorgeous dyes in the mellow autumn.

One must wade through a sea of fallen leaves in the wood, after the heavy frosts of autumn, to form any conception of their vast numbers as they grew upon the trees; and when the student reflects that from the time of its putting forth till its maturity, each leaf is a little physio-chemical laboratory wherein life and light are working out countless subtle processes, whose end is to serve the creature needs of man and adorn his world with beauty, he may take comfort in the thought that though our first parents were driven forth from Eden to labor for their bread, the seeds of the trees and the plants of Paradise must have been wafted abroad over the earth by the winds in blessing, and that still "the Sovereign Planter frames all things to man's delightful use."

If time hang heavy on his hands, the young physician may now and then find solace in the charming revelations of the spectroscope. In our day decorative art, in the making of

books, stationery, and cards for the exchange of friendly greetings, has reached a stage of high development, if not perfection. This fact bears graceful testimony to the rapidly-growing culture and taste of our people, and shows how naturally things promotive of happiness associate themselves with things beautiful. It is fit that our poems, the gems of thought, should have exquisite setting in design and color at the artist's hand, and that the flowers should adorn with heaven-born tints our messages of love ; but with what a sense of the divine appointment of wisdom and beauty does the chemist read the pencilings of light, the handwriting of God, upon the spectroscopic page. Here are unfolded not a few of the deep-laid secrets of nature in things near and far ; here are the signatures of the elements of earth and air ; here are the hieroglyphics of the stars ; here planet and sun, in our own magnificent system, and fixed star and nebula, from out the infinite depths of space, declare the nature and state of their elements, and "repeat the story of their birth," while light, the mes-

senger by which this revelation comes, makes known the mystery of color, and tells us how the rose and lily are arrayed; how the "iris changes on the burnished dove;" how "morn, with rosy hand, unbars the gates of light;" and how the sinking sun doth set the rainbow in the passing shower, or, setting, paint the fleecy clouds with red and purple and gold and all the soft dissolving tints that twilight owns.

A popular esthetic writer has prophesied the coming of a new art, wherein light, in color, shall be made by harmony, rhythm, and modulation to stir the emotions through the eye, as does sound in music through the ear. If the "insubstantial pageant" of this dream shall ever pass before our wondering eyes, it will be under the wave of the magic wand of chemistry.

How kingly is the estate of the astronomer, as he scans through the telescope the shining orbs of the infinite abyss, and hears, as they move in rhythmic order round the central soul, the far-off music of the spheres! With what a perception of the divine harmony of things, and

the majesty of the Creator, does he contemplate star after star and system after system, as they, revolving, sweep their mighty curves at the order of eternal destiny, till he is lost in the infinitely great !

We may well envy him his supreme delight ; but the microscope, now an instrument essential to the physician's calling, unfolds to his view a universe no less marvelous and beautiful. Here he may pass from low to lower forms of the Creator's handiwork until lost in the infinitely small. Here are the same evidences of wisdom in the adaptation of means to ends, the same nicety of adjustment in little life to the conditions of its environment as that which insures the survival of the fittest in the fauna and flora of the greater world, with a perfection of finish which ministers unceasingly to the sense of order and the love of beauty.

In the great world there are blended with, or offsetting the fair features of nature, things rude and unsightly ; in this little world every thing is beautiful. From the faultless facet and mathematically-correct angle of the tiniest

crystal to the elaborate and exquisitely wrought designs in the diatom; from the beaded microbe of zymotic disease to the luxuriant forest of mold-fungi; from the dainty striations of muscular fiber to the extravagant decorations of the insect, there is nothing that does not show the touch of an infinite artist delighted with his work.

Although not exact or shapely in all her proportions, medicine may be said to hold among her sister sciences princely rank. She levies tribute from each and all that it may be melted anew in her crucible, stamped with her image and superscription, and distributed for the common good. In acquiring his education the physician necessarily gains some knowledge of collateral branches of science. Geology is one of these, and botany comes closer home. To those of you especially whose choice shall be a country life, these charming studies will afford abundant opportunity for healthful diversion and culture.

Carlyle has well said that "we see in any line of investigation no more than what

we bring the eye to see." It is impossible that you should have passed through the scientific training essential to your calling without having acquired a fund of knowledge, not strictly medical, which with culture and a little technical study will enable you to read in the book of nature lessons of life and death too deep for the conning of the uninstructed swain, while all your finer senses wake to the beautiful and joy with rapture. Like Shakespeare you may find sermons in stones; with Wordsworth your inward eye may perceive the deeper truths of nature, while your heart is "dancing with the daffodils;" like Burns you may eloquently discourse the problem of life with the mountain daisy; like Bryant you may learn the lesson of immortality while gazing into the mild blue eye of autumn's latest, loveliest flower, the fringed gentian. Nor should you fail to add to your capacity for happiness and usefulness by converse with the poets, and hearing when opportunity offers, if you may not study, the works of the great masters in music. From the dear society of these

sweet singers you will make the daily rounds of duty with your soul vibrating to the rhythm of pure thought and your heart attuned to moving melody, a better doctor and a better man.

How the tedium of the physician's long ride may be lightened, or his weary watch by the bed of suffering shortened, by delightful trains of thought and fancy, inspired through some noble verse or melting melody, called into memory by some passing scene or incident! If he ride by day, a panorama of delightful landscape goes circling past him, while he alone seems fixed and motionless. The sky shapes figures to his fancy in the sailing clouds, or refreshes his vision with the soft light of its azure depths. The rippling laughter of the stream greets him at every bridge and ford, the birds sing carols from meadow, bush, and brake, the winds make music in every wood and field, while in all and through all he may hear, if he will only listen, an anthem of praise to God and good will to men. If, robbed of natural rest, he go forth by night at the call of suffer-

ing, the moon unveils her lovely face and, throwing over hill, dale, meadow, and stream her magic light, sets to his vision scenes more beautiful and forms more fair than ever met the poet's eye in realms of elf or fairy. Or, if she shine not, the stars will shower their myriad twinkling beams upon him, and gently woo his thoughts from earth to heaven. He may feel, like Job, the sweet influence of the Pleiades, or muse like Homer on the Bear

Who wheels on high his circling course,
With watchful eye upon Orion fixed,
And takes no part in the ocean's baths.

Or, if the season fit, the earth may hold his thought with charms no less enticing. He sees "the glow-worm golden in a dell of dew," and myriad fire-flies twinkling in the meadow grass—a moon in miniature, a mimic constellation on the earth—and as he asks, with Milton,

What if earth be but the shadow of Heaven, and
things therein,
Each to the other like more than on Earth is
thought,

the scene becomes religion and the earth holy ground ; for not alone upon the inspired page, but through all nature God reveals himself to man.

But anon the whippoorwill from out the deep recesses of the grove sings her sad song ; the mocking-bird awakes the solemn echoes of the glen ; the night wind, like some unhappy ghost escaped her prison-house, wails in his ear with mournful cadence and the spirit of melancholy steals in upon his musings. The incessant whirl of insects in the trees strikes discord with the moaning wind, and brings to mind the weary round of duty, the noisy contentions, the groans of our sin-cursed, suffering race, whose common heritage of disease and death calls him to a life of irksome toil and harrowing experiences. And now black clouds come trooping o'er his head, the stars are in eclipse, the tempest howls about his ears, and the pitiless rain beats in upon him, making him miserable in body and mind. But he remembers that his is a mission of mercy, and the inner spirit whispers courage as he pursues his dark and difficult way.

The appointed place is reached, the sufferer relieved, and as he reads gratitude in the eye, or hears it from the lips, and meditates upon the sweet beneficence of his chosen calling, he finds himself already well upon the way of reconciliation with fate.

The storm has passed, and, turning homeward, he beholds in the east the roseate hues of promised day. The sky grows brighter and the clouds put on their many-tinted robes of light; more radiantly beautiful the changing colors grow with every flying moment, till the sun springs from his couch of burnished gold and "flames in the forehead of the morning sky." Courage is restored, peace pervades his spirit, and happiness returns. The smile of morning is all the sweeter by contrast with the frown of night, and, bending himself to duty with a keener sense of its sacred requirements and privileges, he lays the lesson to his heart.

But it may be suggested that the legitimate demands of medicine must be the doctor's first and chief concern, and that he who does his

duty by his patients and himself will find the way in which I have ordered his walk to happiness a by and forbidden path. 'Tis true that the long and weary rides of the physician may be fitly lightened and shortened by meditation upon the great themes of pathology and therapeutics; but "man shall not live by bread alone," and he who, failing to perceive the relativity of all knowledge, shall restrict his musings solely to things of the shop, will face the great problems of medicine and surgery without that mental grasp which is essential to their proper solution, if he do not in time dismiss them altogether from his mind. His diagnosis will too often be made by guess, and his therapeutics follow the rut of blind routine. Having failed to learn the true lesson of life in the inspired pages of Nature's book, he will read the great works in medicine (if he read at all) to little purpose, while his ministrations to the sick will fail of that inspiring sympathy which wins the patient's trusting confidence—a powerful adjuvant to his prescriptions and an earnest of future calls.

The most successful contributors to medical science and its classic authors are and have ever been men who have rounded out their mental proportions by general knowledge and large culture.

But while I have laid the foundation of your success in culture, and the ten thousand sources of happiness which it opens to your view in the contemplation of the known in medicine, nature, and art, I would not have you unmindful of the beauty and worth of hypothesis and theory. By this I do not mean that you shall hold truce with those wild vagaries which too often pass muster under these names; but that you shall now and then give exercise to that imperial faculty, the reason, in the careful following of some healthful sequence of thought, from its simple beginnings in familiar fact, onward and upward to the utmost border of the known, and knowing where you stand have courage to take another step. It may not be your privilege, like the great author of the *Philosophy of Clothes*, to “plant new standards, or found new habitable colonies, in the

immeasurable circumambient realm of nothingness and night," but the exercise will give health and vigor to the mind and invest the familiar facts of science with new features of beauty.

Theory and hypothesis have done quite as much for the advancement of science as the observation and annotation of facts. They are the chief foundation stones in the building of all our grand generalizations.

I trust that I have, in some measure, made good my promise to replace with brighter colors the dark outlines of my sketch of the doctor's life, and to throw upon the picture a flood of Heaven's own sunlight. But while the sketch was none too dark for the contemplation of him who would enter the profession with motives of sordid gain, the picture which I leave with you sets forth in no adequate manner the wealth of beauty that shall be revealed to him who espouses medicine with heart and head accorded to the work, and aspirations worthy of his noble calling.

When Ulysses landed upon the Ææan isle,

he sent a band of his followers to the fair halls of Circe of the braided tresses. The artful goddess threw open her shining doors, welcomed them warmly, and feasted them royally, but soon bringing them under the spell of her enchantments, transformed them into swine, drove them into the styes and made fast the door. If, under my view, the fair goddess, whose domain you have just entered, may seem to have dubbed you beasts for her service or diversion, take heart, for Circe in good time unbarred the door, and called forth the hapless prisoners; when, lo! under her magic touch each swine became a man again, but now more youthful and comely in outward seeming and stronger than before; and feasting them for many days with flesh and honey-hearted wine, she sent them with blessings upon their way.

In coming into the realm of medicine, you may at first fancy that you have been put under the spell of a cruel enchantress, who dooms you to tasks irksome and grievous, if she does not transform you into beasts; but ere long you shall see, if you serve her faithfully, that

her service, though trying, grows lighter in the doing, while, under the guiding of her magic hand, the moral, intellectual, and spiritual man in you is ever renewing his youth, acquiring beauty, and gaining substantial strength.



